REMARKS

The final Office Action mailed July 26, 2005, has been reviewed and carefully considered. Claims 1-23 are pending in the application. Applicants appreciate Examiner's indication of allowability of claims 4-6, 10-12, and 20-22.

In paragraph 5 on page 3 of the Office Action, claims 1-3, 7-9, 15-19, and 23 were rejected under § 102(b) over Hall (U.S. Patent 5,579,457).

In paragraph 7 on page 9 of the Office Action claim 13 was rejected under § 103(a) over Hall in view of Vaswani (U.S. Patent 5,835,097).

In paragraph 8 on page 10 of the Office Action, claim 14 was rejected under § 103(a) over Hall in view of Cunniff (U.S. Patent 5,842,015).

Applicants respectfully traverse the §§ 102(b) and 103(a) rejections.

Applicants' Application focuses on generating a spot for use in halftoning that requires defining a spot function that combines two functions selected to provide a predetermined spot shape for use in a halftone cell; and scaling the spot function using a parameterized spot radius scaling function that varies according to a value of a first and second spot function ordinate and a shape changing scaling function.

Hall, teaches irregularly placed curving structures (IPCSs) having a curving structure centers. According to Hall, pixels are assigned a value according to:

$$\sin(\pi * D/1.5) + \text{atan2}(DX/DY).$$

Hall states that D defines the distance from the pixel to the nearest curving structure center. Hall also defines DX and DY to be the coordinates of the curving structure center relative to the pixel.

However, Hall does not refer to the radius of an IPCS. Rather, Hall merely describes factors that affect the angle between arms of the IPCS, the rate of turn of the arms of the IPCS, the numbers of arms of the IPCS and the direction of spiral of the IPCS. The atan (DX/DY) does not scale the radius of the IPCS, but rather merely determines the number of arms. D is merely the distance between a pixel and a nearest CSC. Thus, Hall does not suggest a scaling function for scaling the radius of a spot, i.e., spot radius scaling function.

Hall also fails to suggest a scaling function for a radius of a spot that varies according to a value of a first and second spot function ordinate. Hall merely describes assigning a value to a pixel relative to its position to a CSC.

Hall also fails to suggest scaling the spot function using a shape changing scaling function.. At best Hall merely discloses using the relative coordinates of the nearest CSC to scale the number of arms in the IPCS. However, changing the number of arms in a curving structure such as a spiral is not the same as scaling a spot function for defining a spot using a shape changing scaling function.

Moreover, with reference to claim 3, Hall fails to suggest any function that defines a spot function that uses two functions that are based on the corrdinates of the pixel being considered.

Therefore Hall fails to disclose, teach or suggest Appliants' invention as recited in the independent claims.

Vaswani and Cunniff alone or in combination fail to remedy the deficiencies of Hall. Vaswani focuses on perspective texture mapping, and Cunniff merely focuses on real-time control of hardware. Neither Vaswani nor Cunniff disclose, teach or suggest Applicants' providing "a predetermined spot shape for use in a halftone cell" or " scaling the spot function using a parameterized spot radius scaling function that varies according to a value of a first and second spot function ordinate and a shape changing scaling function."

Hall, Vaswani, and Cunniff alone or in combination, fail to disclose, teach or suggest all of the limitations of Applicants' application. Thus the §§ 102(b) and 103(a) rejections are improper. Accordingly, Applicants request that the Section 102(b) 103(a) rejections be withdrawn.

Dependent claims 2-6, 8-16, and 18-22 are also patentable over the references, because they incorporate all of the limitations of the corresponding independent claims 1, 7, and 17. Further dependent claims 2-6, 8-16, and 18-22 recite additional novel elements and limitations. Applicants reserve the right to argue independently the patentability of these additional novel aspects. Therefore, Applicants respectfully submit that dependent claims 2-6, 8-16, and 18-22 are patentable over the cited references, and request that the objections to the independent claims be withdrawn.

On the basis of the above amendments and remarks, it is respectfully submitted that the claims are in immediate condition for allowance. Accordingly, reconsideration of this application and its allowance are requested.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Attorney for Applicant, David W. Lynch, at 423-757-0264.

Respectfully submitted,

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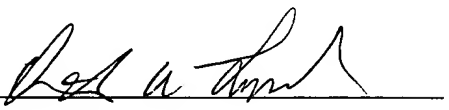
By: 
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